

**MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION
DRINKING WATER PROGRAM**

Date: February 2008

ISSUANCE AND REMOVAL OF BOIL WATER ORDERS

In accordance with Massachusetts General Laws Chapter 111, Section 160 “the department maymake rules and regulations and issue such orders as in its opinion may be necessary to prevent the pollution and to secure the sanitary protection of all such waters used as sources of water supply and to ensure the delivery of a fit and pure water supply to all consumers”. The MassDEP policy 87-06, **Boil Water Orders, Do Not Drink Order, Do Not Use Orders** located at <http://www.mass.gov/dep/water/laws/policies.htm> describes the procedures used, when in the judgment of the MassDEP, a Boil Water order may be issued to respond to a threat to the public from the presence of or probable presences of pathogenic microorganisms in a public water system.

If you have questions on this information or need to issue a Boil Water order please contact your regional or Boston MassDEP office.

Region	Business Hours	After Business Hours /Weekends/Holidays
Western	413-764-1100	
Central	508-792-7650	<i>DEP 24 hour emergency number</i>
Northeast	978-661-7600	1-888-304-1133
Southeast	508-946-2700	
Boston	617-292-5770	

The MassDEP Drinking Water Program uses the following minimum procedures when deciding to issue a Boil Order:

I. EXAMPLES OF DEFICIENCIES REQUIRING A BOIL WATER ORDER

1. Acute bacteria violation (fecal and/or E. Coli present - issued after confirmation samples are taken) or repeated non-acute bacteria violations.
2. Turbidity MCL violation (turbidity above 5.49 NTU)
3. Unchlorinated surface water entering system from an approved source.
4. Unfiltered surface water entering system from an emergency, back-up or other unapproved sources.
5. System without water or with negative pressure zones. (For more information see **MassDEP guide** to public water system response to loss of pressure to all or part of the distribution system).
6. None or inadequate disinfection on a system that is required to disinfect.
7. Dead animals (mice, rats, birds, etc.) observed in an unchlorinated groundwater source.
8. In lieu of routine bacteria sampling where chronic contamination has occurred or is suspected.
9. Equipment failure resulting in inadequate disinfection and/or filtration of a surface water, or ground water under the influence of surface water supply, when the equipment is not immediately repairable.

II. PROVIDING PUBLIC NOTIFICATION

When a Public Water System is issued a Boil Water Order the system shall immediately notify the local Board of health and consumers of its issuance. Notification shall be made with the attached Boil Water Order notice or other notices generated by the MassDEP. Any modifications to the notice must be approved by the MassDEP prior to distribution. Notification may be made through radio, television or a daily newspaper for community systems where hand delivery is impractical. In some instances the MassDEP or US Environmental Protection Agency (EPA) may require additional and other types of public notification.

III. REMOVING A BOIL WATER ORDER

1. CORRECTION OF DEFICIENCY

A boil water order can be removed from a public water system when MassDEP determines that correction of deficiency and satisfactory sampling is completed.

Boil Water Order Deficiency Correction Chart	
Deficiency	Minimum Corrective Action (All corrective actions should be confirmed by sampling results)
Acute bacterial violation.	Establish or reestablish disinfection and maintain residuals. When the existing or potential microbiological contamination cannot be attributed to a specific correctable incident, the supplier should be directed to implement a cross connection survey and initiate symptomatic treatment procedures including, but not limited to, increased disinfection and flushing . For persistent microbiological system failures see Sampling Duration information below.
Turbidity MCL Violation.	Turbidity drops to acceptable levels throughout system.
Unchlorinated surface water entering the system.	Reestablish disinfection.
Unfiltered surface water from an emergency source.	Suspend use of emergency source.
System without water or negative pressure.	Reestablish service and maintain positive pressure. If directed by MassDEP perform cross connection survey and initiate symptomatic treatment procedures including, but not limited to, increased disinfection and flushing .
No chlorination on system with repeated non-acute bacteria violations.	Reestablish chlorination.
No disinfection on a system that is required to disinfect	Reestablish disinfection
Dead animals in groundwater source.	Removal of remains and disinfection of the system.
Order used in lieu of sampling.	Reestablish sampling.
Equipment failure.	Repair or replacement of equipment.

2. BOIL WATER ORDER SAMPLES

The Boil Water Order samples noted below must be taken on the same day, at separate locations, when possible. The samples taken must be representative of the distribution system affected by the Boil Water Order and must all be negative for total coliform bacteria in order to remove the Boil Water Order.

The required number of samples taken to lift a “Boil Order” shall be determined by the DWP and, at a minimum, correspond to the population requirement of the Total Coliform Rule (TCR) but in no case shall be fewer than three. Population determination for the Boil Water Order shall be based upon the affected area of the Boil Water Order.

Population Served	No. of Samples (For ground or surface water)
25-1000	3
1001-2000	4
2001-3000	5
3001-4000	6
4001-5000	7
5001-7500	8
7501-9999	9
10000 or more	10

Sampling Duration for Incident Specific-Microbiological

When the existing or potential microbiological contamination can be attributed to a specific incident (such as a pipe break, equipment failure, or flood) and the supplier has taken appropriate corrective actions, **three consecutive days of compliance with the MCL for bacteria** is generally sufficient to confirm that a threat to public health no longer exists.

Sampling Duration and other actions for Short Term Microbiological System Failures

When the existing or potential microbiological contamination cannot be attributed to a specific correctable incident and lasts for several days or weeks, the supplier will be directed to implement a cross connection survey and initiate symptomatic treatment procedures including, but not limited to, increased disinfection and flushing. When the system responds positively to these procedures within three weeks, **two weeks (at least eight monitoring days) of compliance with the MCL for bacteria** is generally sufficient to confirm that the threat to public health no longer exists.

Sampling Duration and other actions for Persistent Microbiological System Failures

When the existing or potential microbiological contamination cannot be attributed to a specific correctable incident and lasts for several weeks, and a cross connection survey and symptomatic treatment procedures including, but not limited to, increased disinfection and flushing have been completed and the contamination is not resolved, a persistent microbiological system failure is occurring. The MassDEP recognizes that coliform bacteria can colonize public water supply distribution systems. Experience has shown that such situations are very complex, difficult to correct, and frustrating. The risk is two-fold: first that pathogenic organisms may be present, and, second that high background levels mask the ability to use the coliform test to monitor for specific contamination incidents such as cross connections. **In these cases speciation is required after three weeks of experiencing these problems**, or as specified by the drinking water section chief. MassDEP will review the speciation results and make a determination as to the type of contamination and its impact on public health. If necessary MassDEP will convene the Special Interagency Task Force on Microbial Contamination of Drinking Water Systems in accordance with MassDEP policy 87-06, **Boil Water Orders, Do Not Drink Order, Do Not Use Orders**.



EXAMPLE

DRINKING WATER WARNING

Boil Water Order

For the consumers of

This is very important information about your drinking water. Translate it, or speak with someone who understands it.

(PWS Name)

This Order shall remain in effect until further notice!

What should I do?

Due to the possibility of unsafe water, all consumers that use water from the above noted public water system are directed to do the following:

- **Boil All Water** for at least 1 minute at a rolling boil, before using the water for any human consumption purpose. You may cool the water after boiling. Boiling kills bacteria and other organisms in the water.
- **Use Boiled or Bottled water** for drinking, making ice cubes, washing foods, brushing teeth or any other activity involving the consumption of water.
- **Please share this information** with all other people who drink this water, especially those who may not have received this notice directly (for example, visitors). *You can do this by posting this notice in a public place or distributing copies by hand or mail.*

What happened? What is being done to fix the problem?

More information?

Call:

Phone #:

Email:

Visit Website:

Or Call MassDEP Drinking Water Program during normal business hours at

This Order shall remain in effect until further notice!

TO BE POSTED IMMEDIATELY.

This notice is being sent to you by

PWS Name:

PWS ID#:

Date Posted or Distributed:



EXAMPLE

This is very important information about your drinking water. Translate it, or speak with someone who understands it.

DRINKING WATER WARNING

[System] water is contaminated with [fecal coliform] or [*E. coli*]

BOIL YOUR WATER BEFORE USING

Fecal coliform [or *E. coli*] bacteria were found in the water supply on [date]. These bacteria can make you sick, and are a particular concern for people with weakened immune systems.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation **until further notice**. Boiling kills bacteria and other organisms in the water.
- *Fecal coliforms and E. coli are bacteria whose presence indicates that the water may be contaminated with human or animal wastes. Microbes in these wastes can cause diarrhea, cramps, nausea, headaches, or other symptoms. They may pose a special health risk for infants, young children, some of the elderly, and people with severely compromised immune systems.*
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice. People at increased risk should seek advice about drinking water from their health care providers.

What happened? What is being done?

Bacterial contamination can occur when increased run-off enters the drinking water source (for example, following heavy rains). It can also happen due to a break in the distribution system (pipes) or a failure in the water treatment process.

[Describe corrective action.] We will inform you when tests show no bacteria and you no longer need to boil your water. We anticipate resolving the problem within [estimated time frame].

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by

PWS Name:

PWS ID#:

Date Posted or Distributed:



DRINKING WATER WARNING

BOIL YOUR WATER BEFORE USING

This is very important information about your drinking water. Translate it, or speak with someone who understands it.

Disease-causing organisms have entered [systems] water supply.

These organisms are causing illness in people served by [system]. We learned of a waterborne disease outbreak from Massachusetts Department of Environmental Protection on [date].

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, brushing teeth, washing dishes, and food preparation until further notice. Boiling kills bacteria and other organisms in the water.
- [Describe symptoms of the waterborne disease.] If you experience one or more of these symptoms and they persist, contact your doctor. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.

What happened? What is being done?

[Describe the outbreak, corrective action, and when the outbreak might end.]

We will inform you when you no longer need to boil your water.

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by

PWS Name:

PWS ID#:

Date Posted or Distributed:

EXAMPLE



DRINKING WATER WARNING

[System] has high turbidity levels

This is very important information about your drinking water. Translate it, or speak with someone who understands it.

BOIL YOUR WATER BEFORE USING

We routinely monitor your water for turbidity (cloudiness). This tells us whether we are effectively filtering the water supply. A water sample taken [date] showed turbidity levels of [number] turbidity units. This is above the standard of [standard] turbidity units. Because of these high levels of turbidity, there is an increased chance that the water may contain disease-causing organisms.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice.
- *Turbidity has no health effects. However, turbidity can interfere with disinfection and provide a medium for microbial growth. Turbidity may indicate the presence of disease causing organisms. These organisms include bacteria, viruses, and parasites, which can cause symptoms such as nausea, cramps, diarrhea, and associated headaches. People with severely compromised immune systems, infants, and some elderly may be at increased risk. These people should seek advice about drinking water from their health care providers.*
- The symptoms above are not caused only by organisms in drinking water. If you experience any of these symptoms and they persist, you may want to seek medical advice.

What happened? What is being done?

[Describe reason for the high turbidity, corrective action, and when the system expects to return to compliance.]

We will inform you when turbidity returns to appropriate levels and when you no longer need to boil your water.

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by

PWS Name:

PWS ID#:

Date Posted or Distributed:

EXAMPLE



DRINKING WATER WARNING

[System] has unknown water Quality

This is very important information about your drinking water. Translate it, or speak with someone who understands it.

BOIL YOUR WATER BEFORE USING

Water being provided to the residents of the system noted above is of unknown water quality. We are required to monitor your drinking water for specific contaminants on a regular basis. Results of regular monitoring are an indicator of whether or not our drinking water meets health standards. (E.g.) However, due to water system pressure problems we have activated on-site wells that have not been approved as a public water supply, have not been monitored, and therefore we cannot be sure of the quality of our drinking water at this time.

What should I do?

- **DO NOT DRINK THE WATER WITHOUT BOILING IT FIRST.** Bring all water to a boil, let it boil for one minute, and let it cool before using, or use bottled water. Boiled or bottled water should be used for drinking, making ice, washing dishes, brushing teeth, and food preparation until further notice.

What happened? What is being done?

[Describe reason for the unknown water quality, corrective action, and when the system expects to return to compliance.]

We will inform you when turbidity returns to appropriate levels and when you no longer need to boil your water.

For more information, please contact [name of contact] at [phone number] or [mailing address]. General guidelines on ways to lessen the risk of infection by microbes are available from the EPA Safe Drinking Water Hotline at 1(800) 426-4791.

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

This notice is being sent to you by

PWS Name:

PWS ID#:

Date Posted or Distributed:



DRINKING WATER PROBLEM CORRECTED

For the consumers of

(PWS Name)

**This is very important
information about
your drinking water.
Translate it, or speak
with someone who
understands it.**

Customers of system noted above were notified on [date] of a problem with our drinking water and were advised to [describe recommended action]. We are pleased to report that the problem has been corrected and that it is no longer necessary to [describe recommended action]. We apologize for any inconvenience and thank you for your patience.

[Add further details here when appropriate.]

Please share this information with all the other people who drink this water, especially those who may not have received this notice directly (for example, people in apartments, nursing homes, schools, and businesses). You can do this by posting this notice in a public place or distributing copies by hand or mail.

More information?

Call:

Phone #:

Email:

Visit Website:

Or Call MassDEP Drinking Water Program during normal business hours at

This notice is being sent to you by:

PWS Name:

PWS ID#:

Date Posted or Distributed: